NEWS

New global record ‘likely’ within five years

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Latest predictions suggest that Earth’s global average temperature is likely to reach record warmth during the five-year period 2020-2024.

The current warmest year on record is 2016, but the latest forecast based on Met Office computer models suggest a new annual record is likely within the next five years.

Individual years from 2020 to 2024 are predicted to be between 1.06 °C and 1.62 °C above pre-industrial conditions, and it is ‘likely’ the current record - of 1.16 °C, set in 2016, - will be beaten.

Considering the coming five-year period as a whole, average temperatures are expected to be between 1.15 °C and 1.46 °C above pre-industrial levels. This compares to the last five years (2015-2019) which showed average warming of 1.09 °C, and was the warmest five-year period on record.

These temperatures are consistent with continued high levels of atmospheric greenhouse gases.

Dr Doug Smith is a Met Office fellow and expert on decadal prediction. He said: “The latest five-year forecast suggests continued warming, consistent with sustained high levels of greenhouse gases. Uncertainties exist within the forecast, but most regions are expected to be warmer and forecast patterns suggest enhanced warming over land, especially northern parts of Europe, Asia and North America – extending the ongoing trend.”

Current relatively cool conditions in the north Atlantic are also predicted to warm, potentially exacerbating the warming over Europe.

Although the forecast suggests a likely increase in global average temperature over the next five-years, the authors estimate the chance of any single year exceeding 1.5 °C - relative to the pre-industrial period - to be less than 10 per cent.

Professor Stephen Belcher is the Met Office chief scientist. He said: “A temporary exceedance of 1.5 °C doesn’t mean that the Paris Agreement will be breached. The IPCC’s recommendation of keeping global temperature below a 1.5 °C rise refers to a long-term average rather than an individual year. However, with our forecast showing a further warming trend, the window of opportunity continues to narrow.”

The Met Office is a world-leading centre for near-term climate prediction, which includes seasonal, annual, decadal and multi-annual forecasts. Professor Adam Scaife is the Met Office’s head of long-range prediction. He said: “By initialising computer models with the current state of the climate, the Met Office has demonstrated increasing skill to predict fluctuations in the climate. Barring a large volcanic eruption, these predictions show that we are rapidly approaching the point where we will see temporary excursions of global temperature above the 1.5 °C threshold.”

The observations of global temperatures are an average of three leading global temperature datasets: HadCRUT4, NASA and NOAA.

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